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Viable options for ensuring sufficient parking space at United Nations Headquarters

Report of the Secretary-General*

Summary

The General Assembly, in section II, paragraph 17, of its resolution 57/292 of 20 December 2002, requested the Secretary-General to study all viable options to ensure a sufficient number of parking spaces at United Nations Headquarters so as to meet the existing and future needs of diplomatic missions and Secretariat staff within the projected overall budget of the capital master plan. The present report sums up past and projected demand and presents options to increase the number of parking spaces. The Secretary-General recommends reorganizing and rationalizing storage and parking space at the sub-basement levels as a cost-effective solution for ensuring sufficient parking space at the Headquarters parking garage. New construction and mechanized and attendant-assisted parking necessitate substantial construction and operating costs and would exceed the baseline budget for the capital master plan as set out in resolution 57/292.

* The present report was delayed to permit a better projection of current parking needs by performing more detailed needs surveys and analyses at different times of the day before and during the General Assembly session.

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Contents

		Paragraphs	Page
I.	Introduction	1	3
II.	Background	2–3	3
III.	Existing conditions	4–5	3
IV.	Assessment of present and future parking needs	6–11	4
V.	Options to increase parking capacity	12–23	5
	A. Options based on conventional self-parking	13–19	5
	B. Options based on assisted parking	20–22	8
	C. Summary of options	23	8
VI.	Conclusions and recommendations	24–25	9
Annex			
	Summary of options for ensuring sufficient parking space		10

I. Introduction

1. The present report is submitted in response to General Assembly resolution 57/292, section II, paragraph 17, on the capital master plan, in which the Assembly requested the Secretary-General to study all viable options to ensure a sufficient number of parking spaces at United Nations Headquarters so as to meet the existing and future needs of diplomatic missions and Secretariat staff within the projected overall budget of the capital master plan.

II. Background

2. At present there are 1,219 underground parking spaces in the United Nations Headquarters garage — 182 spaces at the first basement level, 585 spaces at the second basement level and 452 spaces at the third basement level, including 26 parking spaces in the service drive. The Secretary-General, in his report on the capital master plan (A/57/285), recommended that certain functions were better suited to be located in the garage, which would take away parking spaces. To offset that loss, certain existing storage areas, locker rooms and other spaces were proposed in the report to be relocated out of the garage, resulting in no net increase or decrease in parking spaces.

3. Alternatives to increasing the number of parking spaces at United Nations Headquarters include reducing the demand by providing incentives for staff to use public transportation and leasing parking spaces outside during periods of high demand.

III. Existing conditions

4. There are three basement levels under the Secretariat Circle and General Assembly building dedicated to parking, stretching from north of the Dag Hammarskjöld Library building to south of the North Lawn area and printing facility and from the First Avenue property line on the west to the Service Drive on the east. A summary of the capacity of the existing parking garage is shown in table 1.

Table 1
Parking garage capacity

Gross parking area	390 307 square feet (36 274 square metres)
Number of parking spaces	1 219
Average gross area per parking space	320 square feet (30 square meters)

5. The capacity of each garage level is shown in table 2.

Table 2
Parking capacity by garage level

Parking level	*Total area for parking (square feet)*	*Number of parking spaces*	*Area per parking space (square feet)*	*Parking spaces by type*		
				General use	*Handicapped*	*Service vehicles*
First basement	81 900	182	450	179	-	3
Second basement	172 439	585	295	582	-	3
Third basement	128 168	426	301	411	9	6
Service drive	7 800	26	300	26	-	-
Total	**390 307**	**1 219**	**320**	**1 198**	**9**	**12**

IV. Assessment of present and future parking needs

Review and analysis of historical parking requests

6. *Parking for delegates*. Delegates with appropriate diplomatic status are issued delegate decals. Since 1996, the number of delegate decals has varied from 1,421 to 1,768 at any given time. Delegate decals have been made available to all delegates on request. Recent parking limitations imposed by the City of New York for diplomatic missions have not resulted, so far, in an increase in requests for delegate decals for parking at the United Nations Headquarters garage.

7. *Parking for staff*. On average, 1,016 staff hold day parking permits, including both permanent and temporary permits. There are pending requests from 458 staff for parking "medallions". The waiting period for issuance of a medallion to a Secretariat staff member averages 8 to 12 years.

8. Those data indicate that an average of 2,400 decals or permits are issued for a total of 1,219 parking spaces. However, because of use patterns, the Headquarters garage has been closed only two times in the past 10 years because it was fully occupied. Parking demand stays within 90 per cent of capacity during most of the year, even though illegal parking in certain areas occurs from time to time.

Future needs

9. It is difficult to anticipate future demand for parking because of the many variables in New York City parking rules and the Organization's operational needs. For planning purposes, it is assumed that demand will remain within plus or minus 5 per cent of the number of requests made for parking permits during the past five years.

Review and analysis of vehicular traffic and parking patterns

10. A study of vehicular traffic into and out of the United Nations Headquarters garage was conducted in the months of July 2003 (pre-General Assembly session period) and October 2003 (after the general debate period).

11. The findings from the July and October 2003 parking surveys are as follows:

(a) The majority of vehicles arrive at the Headquarters garage during weekday morning hours between 8 and 10 a.m. from the 48th Street entrance; the remaining vehicles enter from the 43rd Street entrance;

(b) Peak parking patterns provide an important planning basis (see table 3);

Table 3
Parking demand characteristics by garage level

		July 2003 survey results			*October 2003 survey results*		
Parking level	*Number of parking spaces*	*Peak time period*	*Maximum number of vehicles parked*	*Peak period utilization*	*Peak time period*	*Maximum number of vehicles parked*	*Peak period utilization*
First basement	182	4 to 5 p.m.	207	114%	12 to 1 p.m.	223	122%
Second basement	585	2 to 3 p.m.	485	83%	12 to 1 p.m.	507	87%
Third basement	426	12 to 1 p.m.	362	85%	12 to 1 p.m.	384	90%
Service drive	26	12 to 1 p.m.	17	65%	12 to 1 p.m.	27	102%

(c) Parking utilization at the Headquarters garage remains high, nearly 85 per cent even during the non-General Assembly period and in the summer months. However, average parking utilization does not exceed the practical capacity limit of 95 per cent. Parking patterns at the first basement level continue to exceed that limit at many times during weekdays. A number of vehicles are parked against walls and in driveways, which are not designated for parking under the building codes;

(d) As indicated in table 3, during the July survey parking at the first basement level exceeded the maximum capacity (100 per cent utilization), owing primarily to a significant number of illegally parked vehicles on that level. The October survey revealed an increase in average utilization compared to the results of the July survey. Both the first basement and the third basement service drive were found to exceed the maximum capacity because of illegally parked (or idling) vehicles on those levels. The second and third basements were also highly utilized. The average peak demand was observed to occur on all three garage levels and in the service drive between 12 and 1 p.m.

V. Options to increase parking capacity

12. There are a number of options for increasing the number of parking spaces at Headquarters. Each of the options listed below can be implemented alone or in combination with other viable options.

A. Options based on conventional self-parking

Option group 1: reallocation of storage and reconfiguration of parking spaces

13. As shown in table 2, the area per parking space varies from 295 to 450 square feet per space. A typical parking space needs to be 18 feet deep and 8 to 8 and a half feet wide, the remaining area being for self-parking clearances. A limited number of

additional parking spaces could be achieved by further reorganizing the existing spaces. The net additional number of parking spaces that could be created under this scheme is 66, with an estimated additional one-time cost of $228,000 for lighting, ventilation and support services. The average cost of creating each additional parking space under this scheme would be $3,000 per space.

14. The number of parking spaces that would be available at various levels under that scheme is shown in table 4.

Table 4
Summary of parking spaces under option group 1

				Parking spaces by type		
Parking level	*Total area for parking (square feet)*	*Number of parking spaces*	*Area per parking space (square feet)*	*General use*	*Handicapped*	*Service vehicles*
First basement	64 526	178	363	175	0	3
Second basement	171 833	551	312	485	63	3
Third basement	155 704	530	294	522	2	6
Service drive	7 800	26	300	26	0	0
Total	**399 863**	**1 285**	**311**	**1 208**	**65**	**12**

Option group 2: new construction

Option 2.1: conversion of the third basement document storage area to parking and construction of a mezzanine of equivalent size in the printing area for storage

15. In this scheme, approximately 24,000 square feet (2,230 square metres) of the existing document storage area in the third basement, which was originally designed for parking, would be converted back to parking spaces. To compensate for the loss of storage space, a mezzanine covering approximately 25,800 square feet (2,398 square metres) is proposed to be constructed in the upper part of a portion of the double-height printing plant. This scheme would create 90 additional parking spaces for an additional estimated total cost of $1 million at an average cost per additional space of $12,000.

Option 2.2: new parking facility construction to the east, north and west of the North Lawn building

16. This option, which would maintain the existing structure below the North Lawn, proposes new construction around the printing plant along the east, north and west sides of the remaining unexcavated space under the North Lawn. The new construction would be below grade and would have a landscaped roof structure. If this alternative were chosen, it would require replanting and reconstruction of almost the entire North Lawn and gardens, including moving and reinstalling many of the gifts as well as ornamental trees and plantings. There are both aesthetic and environmental impacts that would need to be mitigated. In addition, it would affect any underground construction planned for the visitors' experience project. An estimated $3 million has been budgeted for restoration of the North Lawn after the completion of construction.

17. This option could entail three stages of sequential construction with a progressively greater number of parking spaces, as summarized in table 5.

Table 5
Summary of parking spaces under option 2.2

Option	*Scope*	*New parking area*	*Number of new parking spaces*	*Estimated cost*	*Cost per new parking space*
2.2.1	New two-storey parking facility to the east of the North Lawn building	129 156 square feet (12 003 square metres)	332	$13 million	$38 000
2.2.2	New two-storey parking facility to the east of the North Lawn building, plus a single storey parking facility on the north end of the North Lawn	163 500 square feet (15 195 square metres)	441	$15 million	$35 000
2.2.3	New two-storey parking facility to the east of the North Lawn building, plus a single storey parking facility to the north and west of the North Lawn	227 895 square feet (21 180 square metres)	660	$20 million	$30 000

Option 2.3: construction of a new parking facility and a new printing plant

18. This option would include demolition of the existing two-storey construction below the North Lawn, which currently houses the printing plant as well as the document distribution and printing areas and offices. The printing and distribution operations would need to be carried out at another leased location for approximately one year, with related interim relocation and servicing costs estimated at $5 million. A new facility would be constructed in its place with a larger footprint of 83,250 square feet (7,737 square metres), compared with the existing footprint of 63,330 square feet (5,886 square metres). The lower level of the new facility would contain a single level of parking at the third basement, and the upper level would have consolidated printing, document distribution and related functions. The new facility would be covered with a landscaped roof. An estimated $3 million is budgeted for new landscaping, ornamental tree relocation and the moving and reinstallation of gifts. It would create 267 new parking spaces at an estimated cost of $25 million and an average cost per additional parking space of $94,000.

Option 2.4: construction of a new parking facility and relocation of the printing plant

19. This option would include the demolition of the existing two-storey printing plant and the construction of a new, larger two-storey facility similar to the one described above under option 2.3. However, for this option, the printing plant would be relocated off-site at an estimated capital cost of $10 million and annual lease and transport costs of approximately $5 million. This option would provide 500 additional parking spaces for a total estimated capital cost of $27 million and an average cost per additional parking space of $54,000.

B. Options based on assisted parking

20. As noted above, floor space of more than 300 square feet per vehicle is required for self-parked cars. More efficient means of mechanized or operator-assisted parking could accommodate cars in less than 200 square feet, but they would entail additional equipment and/or operating costs. The following options could be implemented in the entire garage or in parts of it.

Option group 3: mechanized space-saver parking

21. This option would entail the installation of automatic parking platforms, providing for mechanized parking and moving vehicles closer together, thereby reducing the area required per parking space. The system could be controlled by assigned code, a swipe or contact card, a proximity card or a programmed smart card. The average time required to retrieve a vehicle from a bank of 12 to 15 vehicles is approximately two to three minutes. The advantages of this option are compact layout, fewer aisles, ease of operation and greater security. Its disadvantage lies in high capital costs and operating costs, totalling approximately $40 per month per vehicle.

Table 6
Summary of parking spaces under option group 3

	Second basement	*Second and third basements*
Number of additional parking spaces	130	218
Estimated total construction cost	$18 million	$36 million
Estimated cost per additional parking space	$136 000	$165 000
Estimated annual operating cost	$318 000	$636 000

Option group 4: parking attendant-assisted (valet) parking

22. Parking attendants can park vehicles in less space than that required for self-parking — in 200 square feet per vehicle on average. Attendant-assisted parking could be provided only on certain garage floors or in certain areas and could be considered more or less convenient than traditional self-parking. However, attendant-assisted parking would entail operating costs for attendants as well as a longer waiting period. A typical garage floor would require between five and eight attendants to maintain the waiting period within 10 to 15 minutes, and would thereby add annual costs for attendants of $400,000 per garage level. Valet parking could provide approximately 120 additional parking spaces in the first basement, 261 spaces in the second basement and 307 spaces in the third basement. There would be no additional construction cost, but the average annual operating cost would be $500 per vehicle parked by an attendant.

C. Summary of options

23. A summary of viable options for increasing parking space and their relative costs and benefits is provided in the annex.

VI. Conclusions and recommendations

24. The results of the study confirm that there are a number of options for creating additional parking spaces. Option group 1, which would entail reorganization and rationalization of the existing garage and would add 66 parking spaces at a low initial cost and no additional operating cost, is recommended. Under option group 2, option 2.1 of converting the document storage area to parking and adding a mezzanine to the double-height printing plant would be the least intrusive option, and 90 additional parking spaces could be provided at the modest cost of $12,000 each. Options 2.2, 2.3 and 2.4 would be disruptive to printing plant operations, would have a significant environmental and aesthetic impact on the North Lawn and would add substantial costs for construction that are not included in the baseline scope of the capital master plan budget; hence, they are not recommended. Capital, operating and maintenance costs related to the introduction of mechanized parking would be substantial and its added value-to-cost ratio would be low; hence, it is not recommended. Attendant-assisted parking could provide better use of limited parking spaces, and parking capacity could be increased without additional construction. It could be introduced in certain areas and could be justified for use by those garage users who were willing to pay about $500 a year for this comfort and convenience and could wait 10 to 15 minutes to get their vehicles.

25. The General Assembly may wish to take note of the information contained in the present report and to provide guidance to the Secretariat on the options that should be carried forward in the capital master plan.

Annex

Summary of options for ensuring sufficient parking space

Option	*Description*	*Additional parking spaces*	*Capital cost per new parking space*	*Annual incremental operating costs*	*Remarks*	*Recommendation*
Group 1	Reallocation of storage and reconfiguration of parking spaces	66	$3 000	-	Low capital costs, no additional operating costs; achievable without disruption	Recommended
Group 2	New construction					
2.1	Conversion of third basement document storage area to parking and construction of mezzanine in the printing area for storage	90	$12 000	-	Modest capital costs, no additional operating cost; achievable with some disruption	Recommended
2.2	Construction of new parking facility to the east, north and west of North Lawn building	332-660	$30 000-$38 000	$400 000	Substantial capital costs, adverse impact on environment and aesthetics of North Lawn	Not justified based on space and cost considerations
2.3	Construction of new parking facility and new printing plant	267	$94 000	$400 000	Substantial capital costs, adverse impact on environment and aesthetics of North Lawn	Not justified based on space and cost considerations
2.4	Construction of new parking facility and relocation of printing plant	500	$54 000	$1 000 000	Substantial capital and operating costs, adverse impact on environment and aesthetics of North Lawn	Not justified based on space and cost considerations
Group 3	Mechanized space-saver parking	130-218	$136 000-$165 000	$318 000-$636 000	High capital and operating costs, longer waiting periods, inconvenience	Not justified based on space and cost considerations
Group 4	Attendant-assisted parking	120-688	-	$400 000-$800 000	Additional operating costs for attendants, greater waiting periods, greater comfort	Could be implemented on whole or partial basement floor; issue of additional operating costs and waiting periods would need to be reviewed

Note: Each of the options can be implemented alone or in combination with other options.